

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

AVOCENT REDMOND CORP.,

Plaintiff,

v.

ROSE ELECTRONICS, *et al.*,

Defendants.

Case No. C06-1711RSL

ORDER CONSTRUING CLAIMS

Plaintiff Avocent Redmond Corporation is the owner of United States Patent Nos. 5,884,096 (“the ‘096 patent), 6,112,264 (“the ‘264 patent), and 7,113,978 (“the ‘978 patent) which relate to computerized switching systems known as keyboard-video-mouse (“KVM”) switches. A KVM switch connects a workstation with remotely-located computers/servers and enables a user at the workstation to access, switch between, and control the remotely-located servers. Avocent’s patents disclose an on-screen method for switching between servers. Until recently, the interpretation of ten terms or concepts used in the claims of the three patents were in dispute.¹ Five of those terms were construed by the Honorable Lawrence S. Margolis in Avocent Redmond Corp. v. United States, C08-0069LSM (Fed. Cl. April 14, 2010).

The claims of the patent define the invention and the scope of the patentee’s right to exclude. Halliburton Energy Servs., Inc. v. M-I LLC, 514 F.3d 1244, 1249 (Fed. Cir. 2008).

¹ The night before the Markman hearing, the parties stipulated to the meaning of four of the disputed terms. Dkt. # 345. The Court has considered the stipulation.

1 The proper construction of the asserted patent claims must be decided by the Court as a matter of
2 law. Markman v. Westview Instruments, Inc., 517 U.S. 370, 384-91 (1996). To accomplish this
3 task, the Court focuses on how a person of ordinary skill in the art at the time the patent
4 application was filed would have understood the terms in light of the entire patent. Phillips v.
5 AWH Corp., 415 F.3d 1303, 1321, 1323 (Fed. Cir. 2005).

6 It is the person of ordinary skill in the field of the invention through whose eyes
7 the claims are construed. Such person is deemed to read the words used in the
8 patent documents with an understanding of their meaning in the field, and to have
9 knowledge of any special meaning and usage in the field. The inventor's words
10 that are used to describe the invention -- the inventor's lexicography -- must be
11 understood and interpreted by the court as they would be understood and
12 interpreted by a person in that field of technology. Thus the court starts the
13 decisionmaking process by reviewing the same resources as would that person,
14 viz., the patent specification and the prosecution history.

15 Phillips, 415 F.3d at 1313 (quoting Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473,
16 1477 (Fed. Cir. 1998)).

17 The Phillips decision sets out a framework for claim construction that synthesizes
18 prior law while rejecting the earlier tendency to over-emphasize extrinsic evidence. The claims
19 themselves, rather than dictionaries, encyclopedias, and treatises, provide a context for the
20 contested terms and comparisons against which to measure the scope of the various claims.
21 Phillips, 415 F.3d at 1314-15. Unless the meaning of the claim language is "readily apparent
22 even to lay judges" (Phillips, 415 F.3d at 1314), the court should "rely heavily" on the patentee's
23 written description of the invention (Phillips, 415 F.3d at 1317), giving the claims "their
24 broadest reasonable construction 'in light of the specification as it would be interpreted by one
25 of ordinary skill in the art'" (Phillips, 415 F.3d at 1316 (quoting In re Am. Acad. of Sci. Tech.
26 Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004))). Other evidence of how the patentee and the PTO
understood the claims contained in the prosecution history can also inform the meaning of the
claim language, although the Federal Circuit warns that this resource sometimes lacks the clarity

1 of the patent itself. Phillips, 415 F.3d at 1317.

2 When interpreting claim terms, district courts may also “rely on extrinsic evidence,
3 which ‘consists of all evidence external to the patent and prosecution history, including expert
4 and inventor testimony, dictionaries, and learned treatises.’” Phillips, 415 F.3d at 1317 (quoting
5 Markman, 52 F.3d at 980). Such evidence is especially useful for helping the court understand
6 the underlying technology, explaining how an invention works, and establishing the way in
7 which one skilled in the art would use the claim terms. Phillips, 415 F.3d at 1318. Courts
8 should not, however, put too much emphasis on extrinsic evidence as the starting point for
9 construing claim terms because such evidence “is unlikely to result in a reliable interpretation of
10 patent claim scope unless considered in the context of the intrinsic evidence.” Phillips, 415 F.3d
11 at 1319. The claim construction methodology set forth in Texas Digital Sys., Inc. v. Telegenix,
12 Inc., 308 F.3d 1193 (Fed. Cir. 2002), which encouraged district courts to rely on dictionary
13 definitions when ascertaining the ordinary meaning of particular claim terms, with recourse to
14 the specification serving only as a check on the dictionary definition, was rejected.

15 The main problem with elevating the dictionary to such prominence is that it
16 focuses the inquiry on the abstract meaning of words rather than on the meaning of
17 claim terms within the context of the patent. Properly viewed, the “ordinary
18 meaning” of a claim term is its meaning to the ordinary artisan after reading the
19 entire patent. Yet heavy reliance on the dictionary divorced from the intrinsic
20 evidence risks transforming the meaning of the claim term to the artisan into the
21 meaning of the term in the abstract, out of its particular context, which is the
22 specification.

21 Phillips, 415 F.3d at 1321.

22 Having reviewed the memoranda and exhibits submitted by the parties² and having
23 heard the arguments of counsel on February 2, 2012, the Court finds as follows:

24
25 ² Defendants’ untimely objections (Dkt. # 346) to the DVD submitted by plaintiff on December
26 16, 2011, are overruled.

1
2 **Claim 1 of the '096 Patent**

3 Many of the disputed terms are used throughout the patents, sometimes in various
4 formulations: “transmit,” for example, also appears as “transmits,” “transmitting,” and
5 “transmitted.” Because any construction ascribed to the disputed terms will have equal effect
6 throughout the various claims at issue, the Court starts with claim 1 of the '096 patent,
7 reproduced here with five of the disputed terms in italics:

8 1. A system for connecting a workstation of the type that includes a keyboard, a cursor
9 control device and a video monitor to a number of computers, comprising:

10 a programmable switch for *routing* keyboard and cursor control *signals* from the
11 workstation to a selected computer and for *routing* video *signals* from the
12 selected computer to the video monitor of the workstation;

13 a first interface circuit for receiving keyboard and cursor control device *signals*
14 from the workstation;

15 an on-screen programming circuit that produces video *signals* for display on the
16 video monitor;

17 a programmed logic circuit *coupled* to the first interface that *transmits* the
18 keyboard and cursor control device *signals* to the programmable switch and
19 controls the on-screen programming circuit to produce the video *signals*
20 upon the detection of a predefined input from a user of the workstation, the
21 programmed logic circuit further operating to detect keyboard or cursor
22 control device *signals* received while the on-screen programming circuit is
23 producing video *signals* on the video monitor and to control the
24 programmable switch *in response to* the keyboard or cursor control device
25 *signals* detected; and

26 a second interface circuit disposed between the programmable switch and the
selected computer for supplying the keyboard and cursor control device
signals routed through the programmable switch to the selected computer.

1 **1. “Signal”**

2 Judge Margolis construed the term “signal” as used in the patents-in-suit to mean
3 “any electrical quantity, such as current, voltage, or frequency, than can be used to transmit
4 information.” Avocent Redmond Corp. v. United States, C08-0069LSM at * 5-6 (Fed. Cl. April
5 14, 2010). In Markman v. Westview Instruments, Inc., 517 U.S. 370, 390 (1996), the Supreme
6 Court allocated all issues related to claim construction to the courts, in part as a means of
7 promoting national uniformity in the treatment of a given patent. The Court recognized that only
8 a Federal Circuit construction of a term in the context of a particular patent would achieve the
9 desired result, but it apparently intended that lower federal courts would afford some sort of
10 deference to other lower court decisions in the interim. Markman, 517 U.S. at 391 (the doctrine
11 of *stare decisis* “will promote (though it will not guarantee) intrajurisdictional certainty . . . on
12 those questions not yet subject to interjurisdictional uniformity under the authority of the single
13 appeals court.”). Having found no error in Judge Margolis’ reasoned and thoughtful opinion, the
14 Court adopts his construction of the term “signal” as “any electrical quantity, such as current,
15 voltage, or frequency, than can be used to transmit information.”

16 **2. “Route”**

17 The terms “route(s),” “routed,” and “routing” are in dispute. The parties agree that
18 the term is used as a verb in the claims. Avocent contends that “route” is consistently used in the
19 patent to describe “the movement of data from one point to another without regard for the path in
20 between” (Dkt. # 153 at 11) and that it should be construed as “moving data or information from
21 one intended point to another point” (Dkt. # 153 at 13). Avocent maintains that “route” does not
22 comprehend a specific pathway through which the data or information must move, unless it is
23 that it must move through the programmable switch.

24 Defendants rely on the ordinary and customary meaning of “route” as described in
25 the McGraw-Hill Dictionary of Scientific Terms, 5th ed. (1994): “the assignment of a path by
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1 which a message will travel to its destination.” According to defendants, it is the pre-assignment
2 or selection of a path that gives meaning to the word “route.” Defendants also maintain that the
3 thing being routed is a “signal” rather than the “data or information” posited in Avocent’s
4 proposed construction.

5 The term “route” is not defined in either the claims or the specification, but
6 defendants’ proposed construction suggests a level of detail and permanence that is not required
7 by the patent. Throughout the patent, “route” is used in a rather generic, high-level way to
8 indicate the components or units through which a data packet or signal will pass. For example,
9 “[p]od to pod packets are routed from an input card through the switch card to an output card
10 and vice versa on a digital backplane.” ‘096 patent, col. 6, ll. 28-30. While “route” could be
11 used to indicate the pre-selection of a detailed and static path over which a signal will always
12 move from one location to another, the inventors used the term more generally and as a more
13 passive version of the term “transmit.” See ‘096 patent, col. 6, ll. 47-50 (“To transmit data
14 between the input, output and switch cards of the crosspoint switch, the data is packetized in the
15 format shown in FIG. 2B by the CPU of the card sending the packet.”). To the extent the
16 pathway along which the signal travels is important, it is specified in the remainder of the claim
17 or specification. The choice of verb – whether it is “route,” “transmit,” “forward,” “feed,” or
18 “send” – does not seem to impose any additional limitations.

19 Nor does the common, ordinary meaning of the term “route” require the level of
20 specificity or permanence defendants apparently prefer. A person traveling from Seattle to San
21 Francisco could select a “route” going through Portland even if he did not specify ahead of time
22 the exact roads upon which he would travel or commit to those same roads every time he makes
23 the journey. If, as he approaches Portland, I-5 is congested, he may instead opt to take I-405 on
24 his way south without altering his high-level “route.” If, on his next trip through Portland, both
25 highways are blocked, he may opt to travel through the city center. His path of travel remains
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1 routed through Portland, despite the various pathways used. Thus, neither the terms of the patent
2 nor the ordinary meaning of the term “route” imposes the limitations for which defendants argue.

3 The Court does, however, agree with defendants that the things being sent, routed,
4 transmitted, or forwarded between component parts of the invention are best described as
5 “signals” rather than as “data and information.” Because the inventors used the term “route” as
6 a passive version of the term “transmit,” the Court will construe “route” consistently with Judge
7 Margolis’ construction of the term “transmit.” Avocent Redmond Corp. v. United States, C08-
8 0069LSM at * 10-11 (Fed. Cl. April 14, 2010). The Court therefore finds that the correct
9 construction of the term “route” is “to cause signals to be transferred or communicated from one
10 location to another with the details of the pathway, if any, provided by the surrounding text.”

11 3. “Coupled”

12 Defendants offer a construction of “coupled” that relies exclusively on a dictionary
13 definition of the phrase “coupled circuits.” The only acknowledgment defendants make of the
14 patents-in-suit is to note that the term “coupled” is used repeatedly in the specification and that
15 both circuits and components can be “coupled.” Dkt. # 155 at 16. Defendants make no effort to
16 recite, much less analyze, the way the term is used by the inventors, instead simply asserting that
17 “two circuits are ‘coupled’ if they are ‘so arranged that electrical signals can be transferred from
18 one to the other.’” Defendants do not dispute that circuits and, presumably, components can be
19 coupled both directly and indirectly. Dkt. # 163 at 14.

20 The patent uses the term “coupled” when indicating a connection, whether direct
21 or indirect, between component parts or circuits of the invention. As an example of an indirect
22 connection, the specification provides that the remote servers are “coupled” to the user
23 workstations, even though there are a number of components lying between them. See ‘096
24 patent, col. 3, ll. 1-4. The specification also provides that a keyboard/mouse interface and a
25 central processing unit contained within a signal conditioning unit are “coupled” together where
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1 signals can be transmitted from one to the other. See '096 patent, col. 3, ll. 41-43.

2 It is also clear that the connection contemplated by the term “coupled” as used in
3 the patents-in-suit is not merely a physical connection. Simply tying or glueing one component
4 to another, in the absence of an electrical connection that allows the transfer of signals, would
5 not be sufficient to establish a “coupling.” Both parties apparently agree that any connection,
6 whether it is direct or indirect, must be electrical to satisfy the inventor’s understanding of
7 “coupled.” See Dkt. # 153 at 13. The Court finds that the term “coupled” means “electrically
8 connected, either directly or indirectly.”³

9 **4. “Transmit”**

10 The terms “transmit(s),” “transmitting,” and “transmitted” are no longer in dispute.
11 The parties, and the Court, adopt the thoughtful and well-reasoned construction chosen by Judge
12 Margolis: “to cause signals to be transferred or communicated from one location to another.”
13 Avocent Redmond Corp. v. United States, C08-0069LSM at * 10-11 (Fed. Cl. April 14, 2010).

14 **5. “In Response To”**

15 The parties agree that “in response to” need not be construed. Dkt. # 345 at 2.
16 The phrase “in response to” is not technical or ambiguous. Although common, non-technical
17 terms will sometimes have to be construed in order to resolve a legitimate dispute regarding the
18 outer boundaries of an invention (see, e.g., Ortho-McNeil Pharm., Inc. v. Caraco Pharm. Labs.,
19 Inc., 476 F.3d 1321, 1326 (Fed Cir. 2007)), there is no real dispute between the parties and
20 replacing “in response to” with “in reply to,” “in answer to,” or, as defendants would have it, “as
21 a reply in answer to” would not improve the clarity of the claim. The Court finds that the phrase
22 “in response to” does not need to be construed in the context of these patents.

24 ³ The parties have stipulated to a similar construction, namely “arranged so that electrical
25 signals can be transferred from one to the other, either directly or via intervening elements.” Dkt. # 345
26 at 2.

Claim 10 of the '096 Patent

The sixth disputed claim term appears in Claim 10 of the '096 patent, which states:

10. In a system including a workstation of the type that includes a keyboard, cursor control device and video monitor and a plurality of *remotely located* computers, a method of selectively connecting the workstation to the computers for the transmission between them of keyboard and cursor control device signals, comprising:

- (a) production overlaid video signals for display on the video monitor of the workstation;
- (b) generating a control signal in response to the video signals on the video monitor to route the keyboard and cursor control device signals from the workstation to a first computer of the plurality of remotely located computers and keyboard, cursor control and video signals from the first computer to the workstation;
- (c) transmitting keyboard and cursor control device signals from the workstation to the first computer, and keyboard and cursor control device and video signals from the first computer to the workstation;
- (d) generating a control signal in response to the overlaid video signals on the video monitor of the workstation to route the keyboard and cursor control device signals from the workstation to a second computer of the plurality of *remotely located* computers, and keyboard, cursor control device and video signals from the second computer to the workstation.

6. "Remote" or "Remotely Located"

The term "remotely located" or "remote" is in dispute. The Court adopts the construction chosen by Judge Margolis: "separated by a distance greater than usual." Avocent Redmond Corp. v. United States, C08-0069LSM at * 9-10 (Fed. Cl. April 14, 2010).

Claim 1 of the '264 Patent

Three of the terms contained in, among other places, Claim 1 of the '264 patent are

1 in dispute:

2 1. A switching system comprising:

3 a computer-side interface for simultaneously physically connecting to *independent,*
4 *dedicated cables* of respective keyboard and analog video outputs of plural
5 computers;

6 a user-side interface for physically connecting to a first set of *independent,*
7 *dedicated cables* of a first keyboard and an analog video input of a first
8 monitor;

9 an analog video receiving circuit, connected to the computer-side interface, for
10 receiving analog video signals from one of the plural computers through the
11 computer-side interface;

12 an analog video overlay image generating circuit, disposed between the computer-
13 side interface and the user-side interface, for producing an analog overlay
14 video signals internal to the switching system; and

15 an analog video overlay circuit, disposed between the computer-side interface and
16 the user-side interface, for *combining* (1) *a portion of the analog video*
17 *signals* received by the analog video receiving circuit and (2) the analog
18 overlay video signals generated internally to the switching system to form a
19 combined analog signal that is output to the first monitor via the user-side
20 interface.

21 **7. “Cable” or “Independent Dedicated Cables”**

22 The Court adopts the thoughtful and well-reasoned construction chosen by Judge
23 Margolis for the term “cable,” that is “an assembly of electrical conductors insulated from each
24 other and laid up together,” with or without an outer sheath or wrapping. Avocent Redmond
25 Corp. v. United States, C08-0069LSM at * 7-8 (Fed. Cl. April 14, 2010). To be “independent,
26 dedicated cables,” the assembly of electrical conductors that are laid up together to make an
identifiable “cable” must be devoted to a single task or purpose, such as conveying keyboard
signals, mouse signals, or video signals. There is nothing in the claims or specification,

1 however, that would preclude the bundling of two or more “independent, dedicated cables”
 2 within a common outer binding or wrapping.

3 **8. “Combining”**

4 The ‘264 patent claims an analog video overlay circuit “for combining (1) a
 5 portion of the analog video signals received by the analog video receiving circuit and (2) the
 6 analog overlay video signals generated internally to the switching system” The claimed
 7 circuit forms “a combined analog signal that is output to the first monitor via the user-side
 8 interface.” ‘264 patent, col. 13, ll. 60-67. Avocent argues that “combining” and “combined”
 9 need no construction because the words do not have a specialized meaning in the field of
 10 electronics or KVM switches and a jury would be able to understand their meaning based on the
 11 context provided by the remainder of the claim and the specification.⁴ Defendants, however,
 12 maintain that the jury needs to be told what is produced when the two signals are combined and
 13 argue that the Court should construe the term to mean “mixing of two electrical signals to create
 14 a new (third) signal.” Defendants argue that this construction is consistent with the language of
 15 claim 1 and standard patent claim drafting principles in that the reference to the formation of “a”
 16 (rather than “the”) combined analog signal shows that it is a new element being introduced into
 17 the claim for the first time. Dkt. # 155 at 15 (citing Landis on Mechanics of Patent Claim
 18 Drafting at § 16 (2000)).

19 The Court agrees that “combining” and “combined” are ordinary terms that have
 20 no special meaning in the field of electronics or the ‘264 patent. The items being combined are
 21 specified elsewhere in the claim (namely, “(1) a portion of the analog video signals and (2) the
 22 analog overlay video signals generated internally to the switching system”) and need not be
 23 repeated within the construction of “combining” or “combined.” The result of the combination
 24

25 ⁴ In the alternative, Avocent proposes “to take at least portions of two things and put them
 26 together, to merge them, or to unite them” as the appropriate construction of “combining.”

1 is also stated in the claim, but in a circular manner – the inputs are combined “to form a
2 combined analog signal” Defendants argue that this combined analog signal must be
3 something new, an amalgam of the two specified inputs that, while not specifically described, is
4 distinguishable from both inputs. Avocent resists this rather ordinary understanding of
5 “combine” or “combination,” however, apparently on the theory that one of the inputs could be
6 withheld completely, such that the “combined analog signal” will look just like the single
7 remaining input. Avocent’s construction does not involve “combining” and does not result in a
8 “combination.” If one of the two inputs were missing entirely, the remaining input has nothing
9 with which to be combined and is merely transmitted or forwarded as is.

10 Avocent argues that its odd construction of “combining” must be adopted because
11 the specification compels it. According to Avocent, the inventor’s description of the operation
12 of six tri-state buffers, as shown in Figure 12 of the ‘264 patent and described at col. 12, ll. 26-
13 37, shows that “combined” must be construed to include instances where the resulting signal is
14 identical to one of the two inputs. There is no indication that the inventors considered impeding
15 the same thing as “combining,” however. At no point in the discussion of the tri-state buffers or
16 their operation is the term “combining” or “combined” used, even where the buffers are all
17 active and both signal inputs are allowed to pass through together. Avocent simply declares that
18 “[t]he resulting signal is a combined signal” without any support in the specification or the
19 language of claim 1.

20 For all of the foregoing reasons, the Court construes the term “combining” to mean
21 “mixing, merging, or uniting two things to form an output that is distinguishable from both
22 inputs.”

23 **9. “A Portion of the Analog Video Signals”**

24 Avocent maintains that “a portion of the analog video signals” requires no
25 construction, but that if it does, it should be construed as “some, but not necessarily all, of the
26

1 analog video signals.” Defendants argue that the phrase should be construed in its common and
 2 ordinary way to mean “a part of the whole analog video signals,” but not all. The dispute
 3 obviously centers on the term “portion” rather than the larger phrase identified by the parties.

4 Although “portion” often refers to a part of a whole, it is not always used in that
 5 way. “What portion of the profits (or pie) do you want?” or “What portion of the liability should
 6 be ascribed to defendant X?” could reasonably be answered with “All of it.” The questioner is
 7 not precluding an answer of “100 %” simply by using the word “portion” in the question. The
 8 specifications support a finding that “portion” does not necessarily exclude the entirety. As
 9 discussed by Judge Margolis:

10 [T]he specification discloses a display combination created by using all of the
 11 incoming video signals. [‘264, col. 12.] The “opaque” or “semi-transparent”
 12 mode requires the use of all of the video signals in order to simultaneously exhibit
 13 the underlying display as well as the overlaid menu on the video monitor. [‘264,
 14 col. 12.] . . . Thus, the “portion” of the video signals utilized in that display mode
 15 is *all* of the video signals.

16 Avocent Redmond Corp. v. United States, C08-0069LSM at * 9 (Fed. Cl. April 14, 2010).

17 Given the way the inventor describes his invention, it would be inappropriate to read into the
 18 term “portion” a limitation that is not found in the claim itself or compelled by the ordinary
 19 meaning of the word. The Court therefore adopts the construction chosen by Judge Margolis:
 20 “some, but not necessarily all, of the analog video signals.”

21 **Claim 1 of the ‘978 Patent**

22 Finally, the tenth disputed term is found in Claim 1 of the ‘978 patent:

23 1. A switching system comprising:

24 computer-sided *connectors* including plural computer-side user input device
 25 *connectors* and plural computer-side video *connectors* for simultaneously
 26 physically connecting to independent, dedicated cables of respective user-

1 input device inputs and analog video outputs of plural computers;

2 a first set of user-side *connectors* including a first user-side user-input device
3 *connector* and a first user-side video *connector* for physically connecting to
4 independent, dedicated cables of a first user-input device and an analog
5 video input of a first monitor;

6 a first analog video receiving circuit interposed between the computer-side
7 *connectors* and the first set of user-side *connectors* for receiving analog
8 video signals from one of the plural computers through at least one of the
9 computer-side *connectors*; and

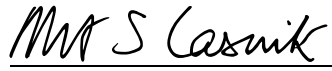
10 a first analog video processing circuit, interposed between the computer-side
11 *connectors* and the first set of user-side *connectors*, for selecting, for at least
12 one sub-region of an image to be displayed on the first monitor, at least one
13 of (1) a portion of the analog video signals received by the first analog
14 video receiving circuit and (2) internally generated analog video signals, to
15 form an output analog video signal that is output to the first monitor via the
16 first user-side video *connector*.

14 **10. “Connector(s)”**

15 Although the parties’ proposed constructions of the term “connectors” vary, they
16 have now stipulated to Avocent’s construction as long as it does not incorporate the separately-
17 disputed term “coupled.” The Court agrees that there is no reason to complicate the claim
18 construction process by utilizing a word which had to be construed in its own right, especially
19 where, as here, the construed meaning is slightly different than the term’s ordinary, lay meaning.
20 Avocent offers no justification of its insistence on using the term “coupled” within the
21 construction of “connector.” Pursuant to the stipulation of the parties, the Court finds that
22 “connector” means “a device which provides an electrical and mechanical junction between two
23 cables or between a cable and a chassis or enclosure.”

24
25 It is so ORDERED.

1 Dated this 6th day of February, 2012.

2 

3 Robert S. Lasnik

4 United States District Judge